IN THE CLAIMS

As set forth below, please amend claims 3 and 27 as follows and cancel claims 1, 2, 4-29, 31-111.

1. (Cancelled)
2. (Cancelled)

3. (Currently Amended) A transgenic fly whose genome comprises a DNA sequence encoding a polypeptide comprising the Abeta portion of human APP wherein said DNA sequence encodes Abeta42 (SEQ ID NO: 2), fused to a signal sequence, said DNA sequence operably linked to an eye-specific promoter GMR sequence; and expressing said DNA sequence, wherein expression of said DNA sequence results in said fly displaying a ~~The transgenic fly of claim 2 wherein said expression of said DNA sequence results in said fly displaying the~~ "rough eye" phenotype.

4. (Cancelled)
5. (Cancelled)
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29. (Cancelled)

30. (Currently Amended) A method to identify compounds useful for the treatment, or amelioration of conditions associated with abnormal regulation of the APP pathway comprising assaying for compounds that can modify the phenotypes induced by expression of Abeta, said method comprising:

(a) providing a transgenic fly whose genome comprises a DNA sequence encoding a polypeptide comprising the Abeta portion of human APP wherein said DNA sequence encodes Abeta42 (SEQ ID NO: 2), fused to a signal sequence, said DNA sequence operably linked to an eye-specific promoter GMR;

(b) expressing said DNA sequence ~~The method of claim 29~~, wherein said expression of said DNA sequence results in said fly displaying an altered phenotype referred to as the "rough eye" phenotype";

(c) administering to said fly a candidate compound; and assaying for changes in the phenotype of said fly of step (a) as compared to the phenotype of a fly of step (a) not administered the candidate compound.

31. (Cancelled)

32. (Cancelled)

33. (Cancelled)

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112. (New) The method of claim 30 wherein said condition is Alzheimer's Disease.